

Sampling of Received Ideas and Comments

Dialogue 1 - Technologies with Broad Impact

1. What criteria should be used to select technology focus areas?

Responses

- ◆ Cross-cutting technology that is relevant and applicable to broad end-uses and multiple industry areas, companies, and sectors as well as the supply chain (for example, advances in metrology, particularly at the nanoscale, will enable advances in advanced materials, composites, semiconductors, etc.)
- ◆ Significant positive impact to U.S. manufacturing; whether it improves the U.S. global competitive and market position or if it is a technology area in which the U.S. could lead
- ◆ Relevance to current industry needs including technologies that address immediate and long-term company and industry problems. The needs can be identified by the industries involved in the Institutes.
- ◆ Impacts on energy and environmental sustainability such as supporting carbon reduction
- ◆ Potential to create new domestic jobs or move jobs back to the U.S. and the quality and quantity of created jobs
- ◆ TRL, especially those beyond basic R&D

2. What technology focus areas that meet these criteria would you be willing to co-invest in?

Responses

- ◆ Additive manufacturing including high speed and precise methods and for materials such as metals, composites, and ceramics
- ◆ Biomanufacturing (including biomimicry), biotechnology, biomaterials and products, and biomedical materials and device fabrication
- ◆ Nanotechnology and nanomaterials
- ◆ Energy, specifically involving the reduction of energy use in energy intensive processes and further development of forms of clean energy (such as photovoltaics or biofuels), and increasing energy efficiency and sustainability overall
- ◆ Sensors, sensing and instrumentation technology, and sensor integrated manufacturing
- ◆ Advanced composites manufacturing and materials
- ◆ Composite materials and manufacturing

3. What measures could demonstrate that Institute technology activities assist U.S. manufacturing?

Responses

- ◆ Impact on domestic employment including the number of direct and indirect jobs created and retained in manufacturing
- ◆ Number of startups including SMEs
- ◆ Number and range of industry partners and contributors engaged in the research
- ◆ IP portfolio including the total number of IP licenses or the number of patents/patent applications related to products or processes
- ◆ Number of companies or industries using Institute developed technologies which demonstrates technology transition
- ◆ Amount invested and continued investment in the Institutes by stakeholders
- ◆ Wealth creation and revenue growth

4. What measures could assess the performance and impact of Institutes?

Responses

- ◆ Number of domestic jobs created and/or retained
- ◆ Amount of industry and regional funding, venture capital attracted, and other forms of public investments
- ◆ Total industry membership to ensure industry participation, partnerships, and engagement
- ◆ IP portfolio including the IP that has been generated and/or commercialized; measure can be along the lines of the number of patents
- ◆ Number of new startup companies and spin offs including SMEs